

Ship Oct 28

Work Order ID 137036

137036

Page 1

Wednesday, September 23, 2015 11:07:35 A

Item ID: D120-637-012 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Heli-Access Step™, RH

Start Date: 9/23/15 Start Qty: 1.00 *1*

Required Date: 9/30/15 Req'd Qty: 1.00 *1*

Reference: INSPECTION BY QC

Cust Item ID:

Customer:

Approvals: Process Plan: MA Date: 15-9-23 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D120-637	E								

105 0.00

105

QC

Quality Control

Memo

PULL FROM STOCK
D120-637-012 X1

B: 13230

KIT TO BE INSPECTED BY QC TO MAKE SURE IT IS OK TO SALE.

DAS
6
9-89DAS
9
9-89

O 15-10-21

P.T.O.

130

0.00

130

Packaging

Packaging

Packaging

Memo

REPACKAGF UNDER NEW PART NUMBER WITH NEW 30 AND NEW
LABELS
PPF D120-637-012
Location: _____

B137036

115 Large Lab: REPAIR AS per NCR
15-10-05

L PC 15-10-05

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☒

Work Order: <u>137032</u> Part No. <u>D120-637-012</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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while inspected kit (D120-637-012) part (D2616-2) was missing				ADD part D2616-2 B97957																																																											
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				OTHER : _____																																																											

DQA:

Date: 15/11/13



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed

Date: 15/11/18

Work Order update only

Work Order: 137036		DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. D120-637-012		Rework ☒	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☒	
NCR No. 15-5449		Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
		Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
		Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐		
Date: 1510-01	Step #: 105	QTY Effective: ①				MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				DAS 15/10/18	
During inspection it was found the step was fabricated and using end cap D2734. Current drawing call for end cap D2669-045		cut aft section of step has per drawing D2678 Rev B Weld end plate D2669-45 B/374021x grind weld and A touch up elodine				DAS Completed By 24 9-89	
P.C. old Rev		Touch up aft section with powder coat has per drawing D2610 Rev E 15-10-B. Grey sandtex M/30746. START: 8:10. OVEN: Ti 320°				AUG 05 2015	
		FAULT CATEGORY FINISH: 8-8-10				Lead hand / Supervisor Approval Verification 9-89	
						AUG 05 2015	
						QC / QA Coordinator Approval 9-89	
						15-10-21	
Root Cause		FAULT CATEGORY					
Environment ☒	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☒	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐						
Misidentified ☐	Past Due ☐	OTHER:					

Work Order ID 137036

Wednesday, September 23, 2015 11:07:35 A

137036

Page 2

Item ID: D120-637-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Heli-Access Step™, RH

Stop ***NS2***

Start Date: 9/23/15 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/30/15 Req'd Qty: 1.00

1

Customer:

Reference: INSPECTION BY QC

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

MLS OCT 28 2015

MF
15-10-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER : ☐																					

Picklist Print

Wednesday, September 23, 2015 11:07:39 AM

Page 1

Work Order ID: 137036

137036

Parent Item: D120-637-012

D120-637-012

Parent Item Name: Heli-Access Step™, RH

Start Date: 9/23/15

Required Date: 9/30/15

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV;A NEW ISSUE 01.04.02 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D120-637-012		Manufactured	No				Each	0.0000		1			
D120-637-012									**				
Heli-Access Step™, RH													

B: 13230 X1 (A) 15-9-23

D2616-2 X1 B: 97457 DAS 38 9-23

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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OTHER : _____																									



DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>MB</i>	APPROVED <i>CS</i>	DRAWING NO. D2678	REV. B SHEET 1 OF 4
DATE 97.09.17		TITLE EC120 STEP WELDMENT	SCALE NTS
A	96.10.22	NEW ISSUE	
B	97.09.17	CHANGE LENGTH AND HOLE PATTERN	

RELEASED
970425 KE
TSR A440

Qty -041	Qty -042	Part Number	Description
X		D2678-041	STEP WELDMENT LH
	X	D2678-042	STEP WELDMENT RH
2	2	D2613	LUG
1	1	D2622	EXTRUSION (CUT PER DWG)
1	1	D2669-45	END PLATE

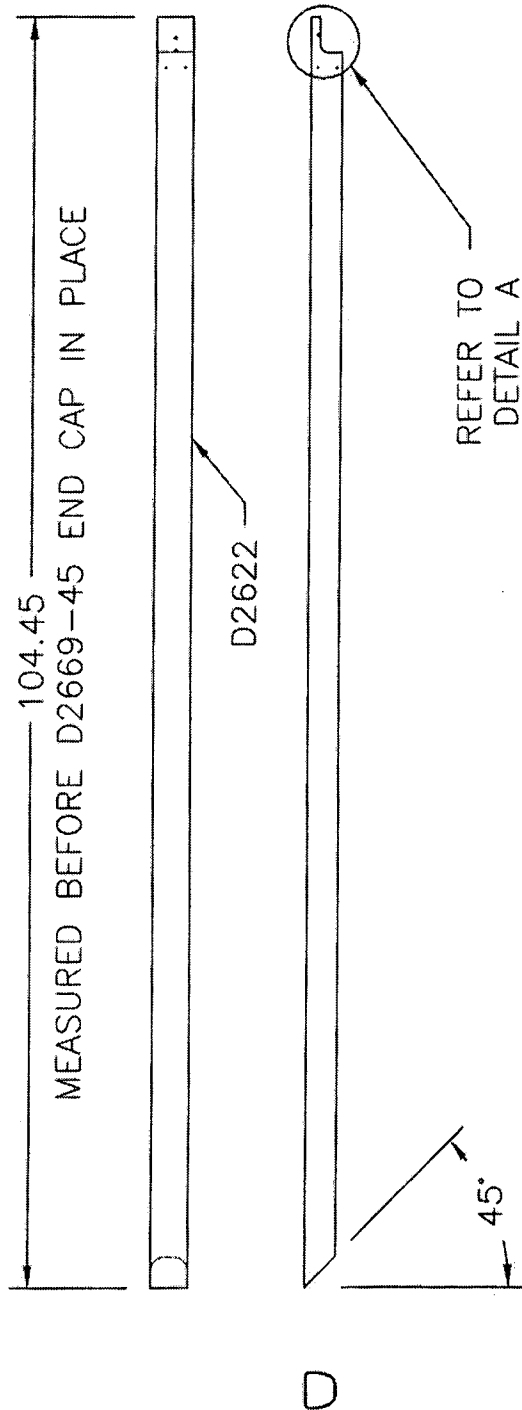
EFFECTIVE	DEOs
9/06	
9/21	



DESIGN KE	DRAWN BY KE	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED DAX	APPROVED OK	DRAWING NO. D2678	REV. -B SHEET 2 OF 4
DATE 97.09.17		TITLE EC120 STEP WELDMENT	SCALE 1:15

RELEASED

970925 KE
TSR A490



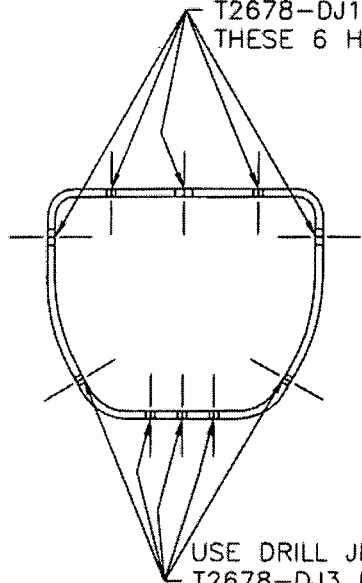
MATERIAL: MAKE FROM D2622 EXTRUSION
FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1



DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2678	REV. B SHEET 3 OF 4
DATE 97.09.17		TITLE EC120 STEP WELDMENT	SCALE 1:2

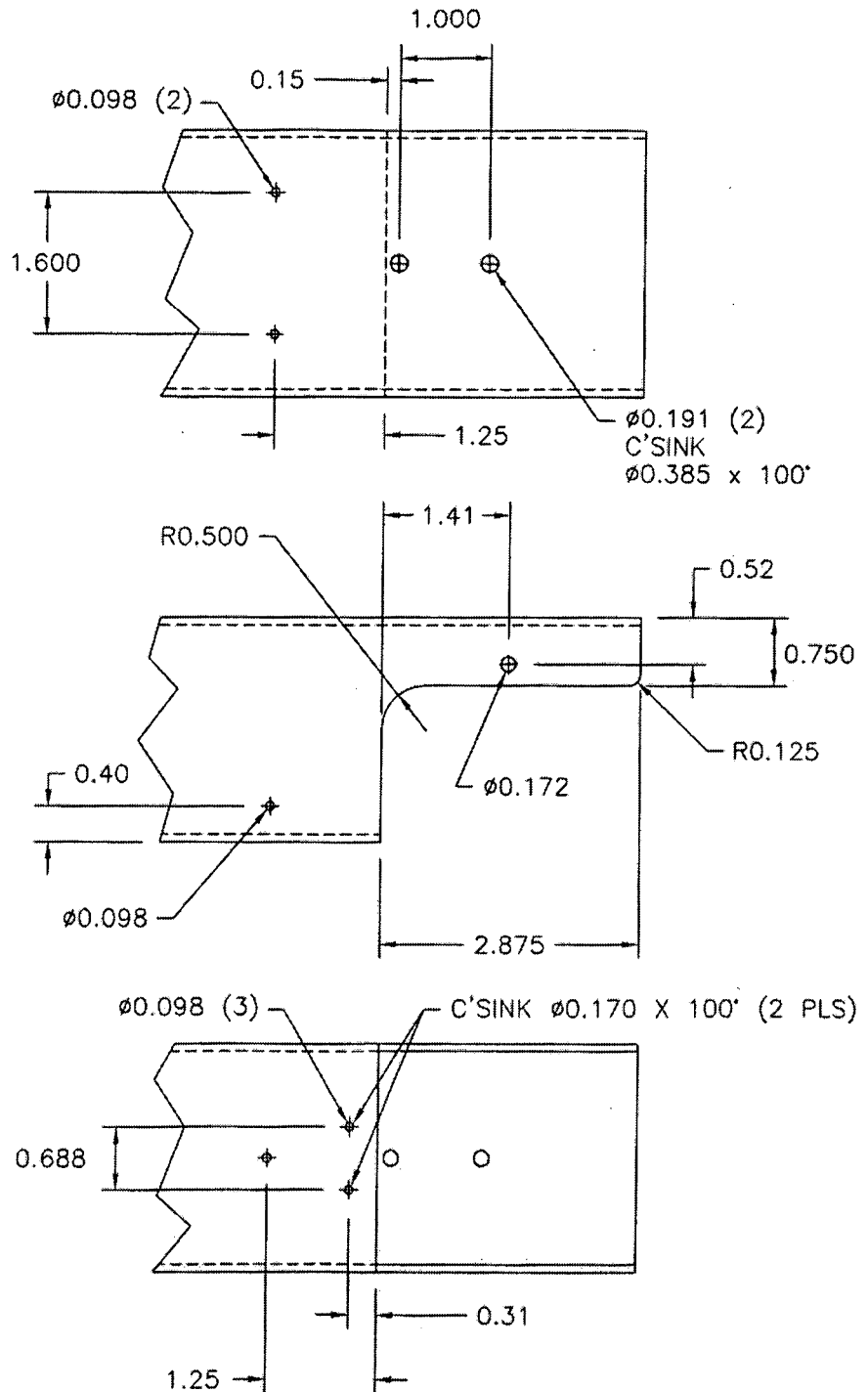
RELEASED
970925 KE
TSR A450

USE DRILL JIG
T2678-DJ1 FOR
THESE 6 HOLES



USE DRILL JIG
T2678-DJ3 FOR
THESE 5 HOLES

DETAIL A

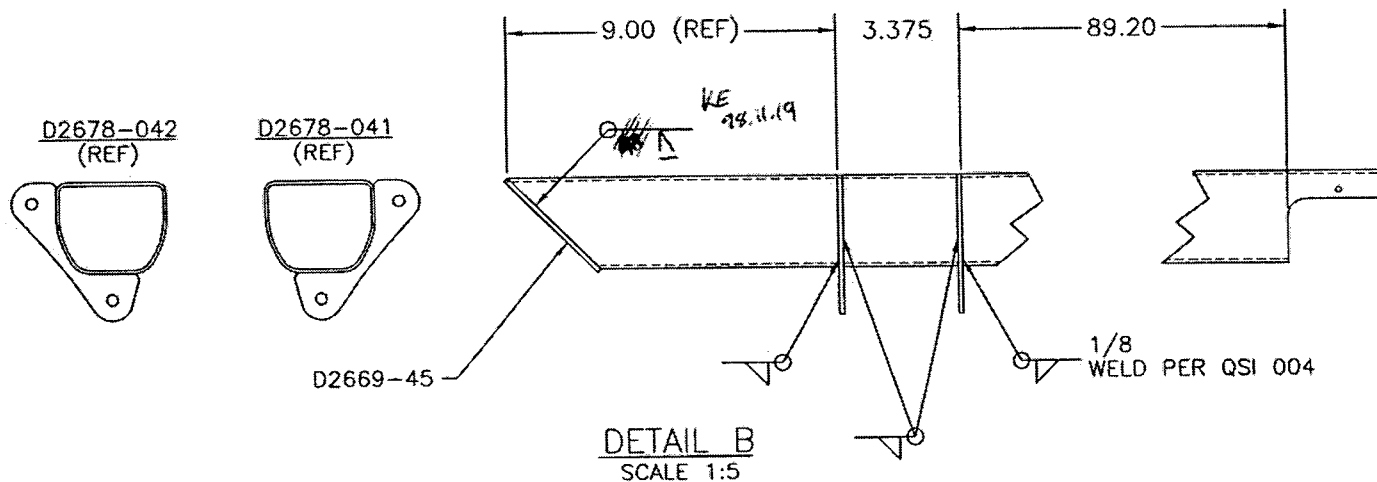
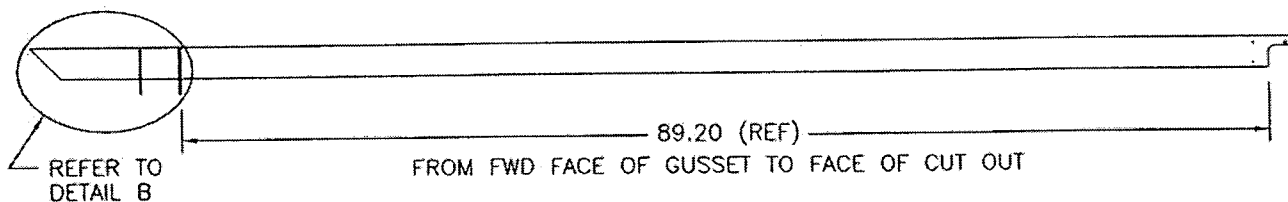
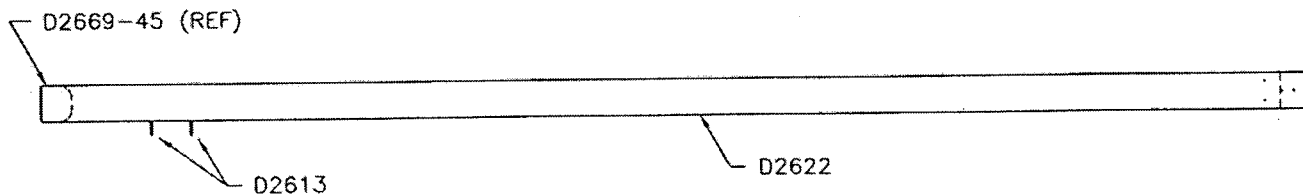


DART



DESIGN	KE	DRAWN BY	KE	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA
CHECKED	WJ	APPROVED	WJ	DRAWING NO. D2678
DATE	97.09.17	TITLE	EC120 STEP WELDMENT	REV. B SHEET 4 OF 4
		SCALE	1:1.5	

RELEASED
970925 KE
TSR A450



D2678-041 SHOWN (L.H.)
D2678-042 OPPOSITE (R.H.)



DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>mm</i>	APPROVED <i>KE</i>	DRAWING NO. D2610	REV. E SHEET 1 OF 2
DATE 97.09.18		TITLE EC120 STEP ASSEMBLY	SCALE NTS
A	96.10.22	ORIGINAL ISSUE	
B	97.01.14	HAND DRAWING	
C	97.05.09	REVISED MOUNTING LUGS	
D	97.06.04	REVISED FWD END OF STEP	
E	97.09.18	ADDED NUT PLATE	

RELEASED
970925 KE
TSR 4450

EFFECTIVE	DEOs
9083	

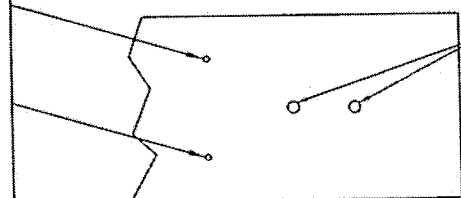
Qty -041	Qty -042	Part Number	Description
X		D2610-041	STEP ASSEMBLY LH
	X	D2610-042	STEP ASSEMBLY RH
1	1	D2674-3	NUT PLATE
1		D2678-041	STEP WELDMENT LH
	1	D2678-042	STEP WELDMENT RH
1	1	D2682-041	SUPPORT PLATE
1	1	D2683-041	END PLATE
2	2	AN960JD10L	WASHER
2	2	MS20426AD3-5	RIVET
2	2	MS24693-S272*	SCREW
2	2	MS27039-1-09	SCREW
5	5	M7885/3-4-24	RIVET (OR CR3212-4-24)

TSR 1341
00.10.12
CP 00.10.12

*MS24693-C272 SCREWS MAY BE SUBSTITUTED FOR MS24693-S272 SCREWS

DEOs	9083 97/10/02 KE								
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Ø0.128 TRANSFER HOLES FROM STEP
C'SINK Ø0.216 x 100'
M7885/3-4-4 (CR3212-4-4) RIVET (5)
(TOUCH UP WITH ZINC CHROMATE PRIMER PER QSI 005 4.2)



MS24693-S272 SCREWS (2 PLACES)
INSTALL PRIOR TO FINISH

SEAL EDGE OF D2683-041
WITH SILKAFLEX*

AN960JD10L WASHER (1)
MS27039-1-09 SCREW (1)
(2 PLACES)

SEAL WITH SILKAFLEX*
INSTALL PRIOR TO FINISH

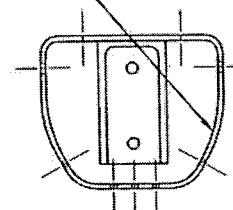
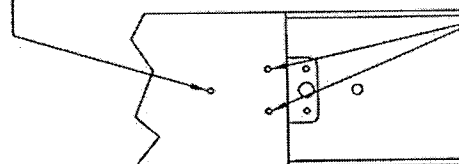
D2682-041 MOUNTING PLATE
INSTALL WHILE SEALANT WET

D2674-3 NUT PLATE

D2683-041 END PLATE
POSITION WITH LOCATION
JIG T2610-LJ

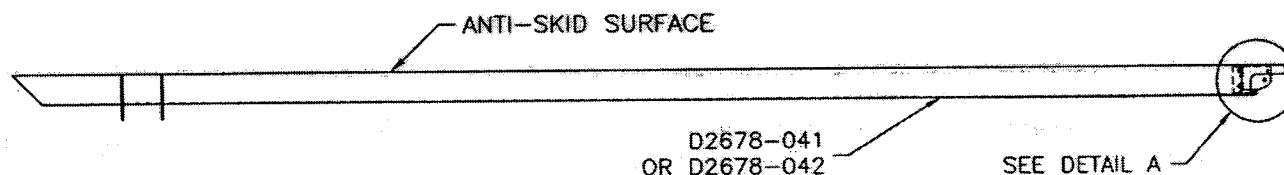
0.750 (REF)

MS20426AD3-5 RIVET (2)



DETAIL A

SCALE 1:3



ANTI-SKID SURFACE

D2678-041
OR D2678-042

SEE DETAIL A

D2610-041 SHOWN (L.H.) (USE D2678-041 WELDMENT)
D2610-042 OPPOSITE (R.H.) (USE D2678-042 WELDMENT)

FINISH: - PRIME PER QSI 005 4.2

OR

- POWDER COAT ASSEMBLY TO CUSTOMER SPEC AS PER QSI 005 4.3
- ANTI-SKID TOP PER QSI 005 4.4 (MASK TO BOTTOM OF RADIUS)

OR

- PAINT ASSEMBLY TO CUSTOMER SPEC AS PER QSI 005 4.2
- ANTI-SKID TOP PER QSI 005 4.4 (MASK TO BOTTOM OF RADIUS)

*NOTE: SILKAFLEX-241 ADHESIVE
PER MANUFACTURER'S SPECIFICATION
POSSIBLE VENDOR: PAYNE'S MARINE SUPPLY

RELEASED
470925 KE
TSR 4450

DART



DESIGN	KE	DRAWN BY	KE	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA
CHECKED	ME	APPROVED	KE	
DATE	97.09.18	DRAWING NO.	D2610	REV. E
		TITLE	EC120 STEP ASSEMBLY	SHEET 2 OF 2
				SCALE 1:15



DESIGN KE	DRAWN BY KE	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED MEY	APPROVED BW	DRAWING NO. D120-637	REV. E SHEET 1 OF 6
DATE 97.09.24		TITLE EC120 HELI-ACCESS-STEP	SCALE NTS
A	96.10.23	ORIGINAL ISSUE	
B	97.02.17	CHANGE FRONT MOUNT	
C	97.05.01	CHANGE AFT MOUNT TO CLEAR FAIRING	
D	97.05.19	CHANGE FRONT MOUNT	
E	97.09.24	CHANGE STEP LENGTH	

Qty -011	Qty -012	Qty -041	Qty -042	Part Number	Description
X				D120-637-011	STEP INSTALLATION LH
	X			D120-637-012	STEP INSTALLATION RH
1		X		D2610-041	STEP ASSEMBLY LH
	1		X	D2610-042	STEP ASSEMBLY RH
8	8			D2274	RADIUS BLOCK B132507 ✓
2	2			D2615-1	MOUNTING LUG B13280 ✓
1				D2616-1	MOUNTING LUG (LH)
	5			D2616-2	MOUNTING LUG (RH) B97457 ✓
1	1			D2617-3	BUSHING B21150 ✓
2	2			D2617-5	SPACER B21251 ✓
2	2			D2618	BUSHING B155836 ✓
1	1			D2619-041	COVER B12337 ✓
		1	1	D2674-3	NUT PLATE
		1		D2678-041	STEP WELDMENT LH
			1	D2678-042	STEP WELDMENT RH
2	2			D2679	MOUNTING CLAMP B13198 ✓
2	2			D2681	CLAMP B13199 ✓
		1	1	D2682-041	SUPPORT PLATE
		1	1	D2683-041	FRONT MOUNT PLATE
4	4			AN4-11A	BOLT M8709 ✓
1	1			AN4-14A	BOLT M7593 ✓
2	2			AN4-16A	BOLT M8798 ✓
2	2			AN5-36A	BOLT M8797 ✓
3	3			AN526C832R8	SCREW M8799 ✓
3	3			AN960JD8	WASHER M6035 ✓
		2	2	AN960JD10L	WASHER
14	14			AN960JD416	WASHER M7700 ✓
4	4			AN960JD516	WASHER M8813 ✓
		2	2	MS20426AD3-5	RIVET
7	7			MS21042L4	NUT (OR MS21042-4) M8182 ✓
2	2			MS21042L5	NUT (OR MS21042-5) M5239 ✓
		2	2	MS24693-S272	SCREW (OR MS24693-C272)
		2	2	MS27039-1-09	SCREW
		5	5	M7885/3-4-3	RIVET (OR CR3212-4-3)